

Amendments to the Claims:

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

1-8. (Canceled).

9. (New) A semiconductor system comprising:

a pn transition; and

a chip having an edge region, the chip including a first layer of a first conductivity type and a second layer of a second conductivity type opposite to that of the first conductivity type, the first layer having the edge region and a center region, the pn transition being provided between the first layer and the second layer;

wherein the second layer is more weakly doped in the edge region than in the center region, and the boundary surface of the pn transition is non-parallel to the main chip plane at the edge region.

10. (New) The semiconductor system of claim 9, wherein the pn transition includes a diode.

11. (New) The semiconductor system of claim 9, wherein the boundary surface of the pn transition includes a positive beveling angle at the edge region.

12. (New) The semiconductor system of claim 9, wherein the boundary surface of the pn transition is curved at the edge region.

13. (New) The semiconductor system of claim 9, wherein a thickness of the chip is less at the edge region than in the center region.

14. (New) A method for manufacturing a semiconductor system, comprising:

forming a pn transition;

forming a chip having an edge region, the chip including a first layer of a first conductivity type and a second layer of a second conductivity type opposite to that of the first conductivity type, the first layer having the edge region and a center region, the pn transition being provided between the first layer and the second layer; and

doping the second layer more weakly in the edge region than in the center region, wherein a boundary surface of the pn transition is non-parallel to the main chip plane at the edge region; and wherein the first layer is manufactured using patterned doping.

15. (New) The method of claim 14, wherein the patterned doping is provided by pre-coating the chip with dopant, subsequently removing the coating in a sub-region of the chip, and subsequently introducing the dopant into the chip.

16. (New) The method of claim 14, wherein the coating is removed by sawing.

17. (New) The method of claim 16, wherein the sawing is performed with at least one of a diamond saw and water-supported laser cutting.

18. (New) The method of claim 14, wherein the chip is pre-coated with dopant via at least one of APCVD deposition of a doped glass, a doping film, a gas phase coating, ion implantation, and an application of doping pastes.